Discussion | Sticky palms as an adverse effect of retinoid therapy has been described to be dose dependent: with gradual decrease of retinoid dose, symptoms improve (but do not disappear).1,2 One of the hypotheses is increased mucin (glycoprotein) production by the palmar eccrine sweat glands in response to retinoid therapy (especially etretinate).3

To our knowledge, sticky palms as an adverse effect of proton-pump inhibitors has not been reported. The 2 patients in the present cases experienced relief shortly after stopping the treatment.

Although we cannot explain this presentation, it needs to be recognized by clinicians because we believe it might be more common than the limited reported observations.

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Rat Bite Fever Presenting As Palpable Purpura

Rat bite fever (RBF) is a rare infectious disease with a nonspecific presentation and potentially fatal complications. We report a case of RBF presenting as palpable purpura.

Report of a Case | A female patient in her 50s presented with a 5-day history of fever, chills, diffuse pain, and an eruption. She reported having a pet rat and, while denying any bites or scratches, remarked that the rat often licks her hand, adding that 2 days earlier, she had accidentally cut her index finger.

Physical examination revealed multiple 2- to 3-mm tender palpable purpura predominantly localized to her lower legs and feet bilaterally (Figure 1), with a few lesions involving the palms and soles. Several lesions were studded with a central pustule. Her right second distal interphalangeal joint, left first metatarsophalangeal joint, and left ankle were warm, edematous, and tender to palpation. Her right shoulder was also tender to palpation, with range of motion limited by pain. Laboratory analysis findings were unremarkable, and skin biopsy revealed neutrophilic microabscess formation involving the epidermis and papillary dermis along with subepidermal edema and intravascular thrombi with no evidence of vasculitis (Figure 2). During her initial diagnostic workup, she was empirically treated with intravenous ceftriaxone and oral doxycycline.

The patient had significantly improved by day 7, when her blood sample returned from polymerase chain reaction (PCR) analysis with positive findings for Streptobacillus moniliformis, the leading cause of RBF in the United States. She was discharged on a regimen of oral doxycycline to complete her 14-day course of antibiotic therapy. On the final day of her antibiotic treatment, she called complaining of swelling in her left index finger. Doxycycline treatment was discontinued, and oral penicillin V potassium was initiated until her follow-up visit 8 days later, when her finger showed improvement.

Discussion | Rat bite fever is a rare zoonotic disease caused by infection with S moniliformis, the predominant cause of RBF in the United States, or Spirillum minus, which prevails in Asia. Colonized rats transmit the infection to humans through bites or scratches, although transmission can also occur by ingesting food or water contaminated by colonized rats.4 Within 3 to 10 days of exposure, the infection produces a systemic illness, characteristically presenting with fever, chills, headache, and emesis. Patients may also develop polyarthritis or an eruption, which commonly localizes on the extensor surfaces of extremities, as well as on the palms and soles, and can be maculopapular, petechial, or purpuric. First-line treatment for RBF is intravenous penicillin, and doxycycline, and streptomycin. Although most cases of RBF can be successfully treated, it is a rare disease with a nonspecific presentation and is frequently misdiagnosed, with an untreated mortality rate ranging from 7% to 13%.5 6

Previously, RBF has been associated with numerous potentially fatal complications including endocarditis, pericarditis, interstitial pneumonia, hepatitis, nephritis, septic arthritis, meningitis, systemic vasculitis, and sepsis.5,6

The nonspecific presentation of RBF evokes an extensive differential diagnosis, including bacterial and viral infections, vasculitides, and drug reactions. Given its life-threatening complications, patients presenting with these symptoms should be queried for a history of rat exposure,
recognizing that the absence of a bite or scratch does not preclude RBF. Moreover, clinicians with a high degree of suspicion for RBF should immediately notify the laboratory to prepare for the unique collection and culture requirements of *S. moniliformis* and, while awaiting the PCR or blood culture results, consider empirical antibiotic treatment.\(^5\,6\) With increased awareness and understanding of RBF, timely diagnosis and treatment are likely to improve patient outcomes.

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**Anagen Effluvium Caused by Thallium Poisoning**

Anagen effluvium is the abrupt loss of hair during the growth phase due to an insult that impairs mitotic or metabolic activity of the hair follicle. This form of hair loss is essentially synonymous with chemotherapy-induced alopecia. Less common causes include medications, radiation, toxic chemicals, and inflammatory disease. Thallium, once considered the “poisoner’s poison,” is an odorless, flavorless, colorless heavy metal and a rare cause of anagen effluvium.

**Report of a Case** | A 25-year-old man with history of depression had repeatedly presented to urgent care with flu-like symptoms. Five days after one of these visits, he returned with hypertension and tachycardia. Within 3 days he had difficulty moving from his bed and was admitted with weight loss, peripheral neuropathy, and continued fatigue. Initial workup, including magnetic resonance imaging of the brain, spinal radiography, lumbar puncture, and testing for heavy metals (including lead, mercury, cadmium, and arsenic), revealed nothing abnormal. Additional testing was performed for pheochromocytoma, Guillain-Barré syndrome, lupus, streptococcal infection, human immunodeficiency virus, legionella, and thyroid disease, and results were negative. During admission, he developed diffuse hair loss and dermatology was consulted.

On physical examination, diffuse alopecia with preserved follicular ostia was noted (Figure 1), and a positive

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**Figure 2. Hematoxylin-Eosin-Stained Histopathologic Findings**

[A] Original magnification ×10

[B] Original magnification ×40

A, Biopsy specimen from a lesion on the right foot reveals an intraepidermal collection of neutrophils associated with papillary dermal edema. Neutrophils were also identified in the upper dermis. Intravascular thrombi (arrowheads) were present in the area of the neutrophilic infiltrate in the upper dermis (original magnification ×10). B, Higher magnification of the same specimen highlights the intravascular thrombi (arrowheads) (original magnification ×40).